

Transwaste Transcripts

Adam Interview

Where do you collect your rubbish from?

We've got two main sources of rubbish. The collections: we do, the curb side collections where the trucks come and pick up your bin from home and bring it here for us; and the other one is where residents bring their rubbish in themselves. Of course, there's also the minor contractors that have bins at your houses. They bring their trucks in here as well.

What does the recycling get used for?

The bottles get turned back into bottles, which is really good because that's the full true purpose of recycling, is to reuse something for a certain intended purpose. I believe the other plastics, the hard plastics, which is ones, twos, and fives, are food quality to start with, and they get turned into other items - plastic, I know there was someone looking at maybe making soft plastics into fence posts and things. So, there's various uses, and I think it's important that we try and examine and investigate those as best we can.

What do you think people could be doing more to reduce waste?

To reduce waste? I think we've got to look at what they're buying and how they're buying it and the packaging. It's, yeah, it's a real difficult one because we've become a using society and there's so many things we like to have. I mean, we know the tetra packs that we get our long-life milk and stuff in is just not recyclable at all. Yet, the only way we can stop producing it is to stop using it, or to lobby the groups to package it differently. So, we've just got to be serious and sort of conscious about what we're doing. And if something's not recyclable, don't put it in your recycle bin, because all it does is contaminate the rest of the load.

Where does the recycling go?

So, we're only a transfer station. So, everything that comes in here goes somewhere else to be processed. The rubbish goes to Kate Valley, the recycle goes to EcoSort in town for the recycle drop-off, then the cardboard, the glass and the plastics all go to different places in town to be processed.

What happens with all the green waste?

OK, well, there's two types of green waste. So, there is the green waste that comes from people when they do their gardens and cut their hedges. They bring that in, and that gets binned and goes to Living Earth. And then we've got the organics, that comes - it's got a lot of foodstuff in it - that comes from your home, from your collections into your green lidded bins. So, they all go in separate containers and go into Living Earth in Bromley, where they turn it into compost.

It's about a three-week process. So, it's really accelerated composting. And it's really important that we don't have any contamination in there. Otherwise, that can ruin the whole process.

Why is it that you collect green litter bins every week, and the other two-coloured bins only once every two weeks?

Simple answer the smell. OK, because most homes, when you're putting your rubbish into the green bin, you're putting your organics, you're putting your food, the old fish, the old ham... And after a couple of weeks, it starts to get a bit high, especially in the heat of summer.

So, it's a weekly... We want to get it to Living Earth before it starts composting here, so that they can put it through their process.

What do you do with the clean fill and the hard fill?

Yet we package that up into the bins and we take that up to Sutherlands Pit, which is on the Oxford Road, and it goes in a big hole in the ground. Because it's clean, it's contamination free. We specifically check that we're not getting anything with asbestos in dropped off.

So, it's only the clean bricks, concrete and soil that we send away.

Could you tell us a bit more about the compacting, the process?

Yeah, sure. So, people drop their rubbish in. They'll drop it off the side of the pit, and we use a loader or load the compacter, into a big hopper. And that will push it - it's a very powerful machine - it pushes into a pod. Now, the trailer pods will hold 17 and a half tonnes, and the truck pods 10 and a half tonnes. And that gets packaged and pushed in - we shut the doors, make sure it's all tight and nothing can fall out - and taken up to Kate Valley.

Saffron Interview

How was Kate Valley brought to existence?

It started back in the late 1990s when some of the councils started looking for another site to put a regional landfill in the area. And it was also because Burwood Landfill in Christchurch was starting to close. So, they started looking for sites and ultimately came up with Kate Valley in about 2002. They started making plans.

What are your plans to reduce rubbish?

I do think we're actually starting to see a reduction in waste volumes of rubbish coming out of the city because everybody's so much more aware of reducing the waste.

Tell us about Tiromoana Bush

Yeah. Tiromoana Bush is out beyond us there, you can see towards the ocean. When Transwaste bought the property, they recognised that there were some remnants of old coastal forest out there, and after consulting with a professor at the university, decided to, to set aside 400 hectares as a sort of regional reserve for the public.

So, they put in a walkway out there, planting lots of native trees, getting rid of all the pests, all the animals that eat birds and things, and all the birds are actually starting to come back. So, every year we were planting up to 10,000 native plants in that area. And it's a really great sort of half-day walk for the public and well used.

Well, is your main end goal?

Ultimately, you know, Kate Valley is a very highly engineered landfill. So, we have the liner underneath, and we capture the gas. Really, what we're trying to do is dispose of the waste in a good, safe, environmental way so we don't have any problems in the future.

It would be nice to have no waste at all. But that, for the moment, it is not a reality. You know, everybody's still producing rubbish. So, you know, Kate Valley is what we call "state of the art" engineering. It's the best place to be putting it.

Do you get funding from the government?

Not really. The costs of running the landfill, etc. really come from the councils and the users, the people who dispose of the waste here. So, it's all of us that live in Canterbury that send our waste here, ultimately pay through our rates and things through the councils.

But we also have a lot of businesses that send their waste here as well. Construction, demolition, waste, manufacturing waste, and they pay directly to Transwaste. And it's collected on our weighbridge here. Basically, every tonne of waste that they bring in here they get sent a bill.

Poppy Interview

What happens when a truck arrives from Southbrook?

When it turns up here, it goes into one of the lanes you can see behind us. And when he gets in there, he'll disconnect his trailer, then he'll take off the bin off his truck and put it on the ground. He'll pull the one off his trailer and put it on the ground. And then two things happen from there. One, he'll go and get empty bins and reload himself, and go straight back to Southbrook. And the guys here operating with their eight-wheel drive trucks will then take the bins he's brought here down to the waste face and empty it.

Why don't the trucks coming from Southbrook dump the rubbish straight onto where it's going to be buried?

The site here is a closed site and because of that, we only allow the trucks that work here to go down there. Because of that, too, we have less maintenance on our roads, and we don't get any dirt transferred from the waste face or the landfill onto their trucks, to transfer onto the road.

How much waste is collected and buried a year?

It varies from year to year. We've had in the past about 250,000 tonnes. And last year we were looking at around 350,000 tonnes due to all the additional pressures of ex-earthquake stuff and people cleaning out their houses after Covid.

How much rubbish would you say you have in your dump currently?

At the moment there's just over four million tonnes worth. The landfill has been operating since 2005 for sixteen years, and we've collected four million tonnes.

How did you prepare the ground for burying the waste?

Before we bury the waste, we have to build a special landfill cell. So, we sculpture the land, and we line it all with very thick plastic. Once that's down, we put gravel on top of it. And then only after that do we put waste on top of that.

What sort of soil do you use to cover the waste?

The first thick cover is a clay, and the clay is specifically, so we don't get any odour out or water into it. On top of that, we put topsoil for the grass to grow.

What do you plant on the dirt covering the waste?

We can only plant grass. The risk with planting trees is that the root will go in and break through the soil into the waste. So therefore, we can only plant grass.

Will the liner start to decompose? And how will you monitor this?

The liner won't decompose. It's designed to last virtually forever. We monitor it by monitoring the waters that go under the landfill and around the landfill. We also monitor the leachate contained in the landfill, so we would know if any leaked out.

Rangi Interview

How long have you been working for Transwaste?

Oh, I've been here 10 years this year.

What are your duties here?

So, my duties here is the main dozer operator, and it's controlling all the trucks with all this general waste coming into the valley. Also, all our dump trucks that are bringing in daily cover to cover up all the waste at the end of the day. Other duties is the compactor that compacts the rubbish. And now and again on the digger, which covers up all our rubbish every day and our general special waste, that come into the valley.

What type of training is involved?

A lot of training is involved in heavy machinery, how to get in and out of your machines. We do a prestart every morning to make sure you got your oils and your water levels and all that. So, you've got to make sure you know where to find all of them. What you're looking for with their tracks, any damages that might crack - any major stuff we have to get specialized people in to fix them.

What type of skills do you need to ride the machines?

So, for your dozer, your compactor, and your digger you pretty much need good hand and foot control, because you're using everything. Using your eyes is probably your main one as well. Looking out for your surroundings of all the different types of machines that are coming nearby you, pedestrians, people being around on the floor. And that's about it, really.

Tahlia Interview

Where does all the electricity go?

So, the electricity that we generate on site goes out through those power lines and out into the, what they call the national grid. So, it basically goes into the ..., down at Waipara there's a substation where the power gets put into, and then it's distributed around the country.

And how much is each generator?

Yeah, that's a good question. The last generators we put in G3 and G4 because we have four of them. So, the third and fourth one cost about one point four million dollars each. By the time we get them shipped in from Europe, and we do all the works and pipe works to connect them up. So, they been one point four million dollars each.

What is your target in terms of generators?

Yeah, well, say, for the moment we have four generators, so that's four megawatts. Each one is one megawatt, and a megawatt's, about a thousand houses of power. So, you know, at the moment, we have enough power to sort of run 4,000 houses, and ultimately, we'll probably have around 10 megawatts. So, you know 10,000 houses, which just for scale, it's basically just about the population of Hurunui District Council up here. So, we reckon we'll get up to 10 megawatts.

Is the power created for each generator for the South Island grid only?

No. Generally, when it goes into the grid, it all gets mixed up. So, it's power that just basically goes through the lines, and this is distributed through the lines wherever it's needed, really. We sometimes joke about our neighbours here having very fresh power, but it's not quite, quite that way. But generally, it just gets used wherever it's needed.

What training is required for the generators?

It's a range of training. The main one I guess, to keep the engines running, because we have to repair them quite regularly as a mechanic. So, we do have one fully trained mechanic. He has two technicians that also help with all of that work, and they also do all the measurements of the gas field, all the wells and things around. They also install the gas lines, the wells, and then there's a supervisor that sort of manages that team. And you've got to understand the electricity side of it as well. So, it's quite a mixed bit of experience that those guys need to have.

What computer system is required for the generators?

Yes. So, the engines that we have here are Jenbacher, they're made in Austria. They come with their own systems, their software. So, they've got sensors on the engines that will automatically stop the generator if something starts to go wrong, rather than it get damaged.

They're also designed to send messages to the mechanics, to my guys. If they stop or something is going wrong with the engine, they'll send a text message to the car so that they know that it's got a problem. But they'll also, as I said, shut themselves down as well.

So, you know, it's quite sophisticated software that comes with them.

Documentary

The Kate Valley landfill is working hard to be as environmentally friendly as possible. They separate organic waste (which is any biodegradable waste containing plant or animal matter) from other rubbish, for the generators to convert the organic waste into renewable energy!

When you decompose organic waste, it releases harmful gases into the atmosphere called “greenhouse gases” - mainly methane, but also carbon dioxide. But Kate Valley has pipes which stop the gases from being released into the atmosphere and they collect the gas and store it, to be used as fuel for the generators to create electricity!

There are four generators on site, and each generator produces about one megawatt of electricity (one megawatt is equal to one million watts of electricity) and can be used to power around 1,000 Kiwi homes!

The generators are on 24 hours a day every day and only get turned off rarely, when they need maintenance or repairs done. Each generator lasts around 10 years. Then they need to be replaced.

Ko Ngāi Tahu te iwi

Ko Ngāi Tuahuriri te hapu

Ko Mahaanui te Tuarua te whare.

Ko Tuahiwi te Kura.

Our Kura is in Tuahiwi. Our marae is across the road. We are Ngāi Tūāhuriri.

Transwaste have consulted Te Rūnanga o Ngāi Tahu and Ngāi Tūāhuriri during the life of the Landfill at Kate Valley and the restoration of Tiromoana Bush. In the year 2000, a charter was established between Transwaste and Ngāi Tūāhuriri.

In December 2018 an ika pou whenua was unveiled as part of the opening of the new walkway. Pou whēnua represent the relationship between tūpuna, whenua and the mana o tangata whenua. Its name is Te Ara Matairangi. It is tall. It stands at a lookout, on a cliff, at the end of the walkway. It overlooks the beach, Tiromoana Bush and the valley. The cliff drops away at the sea and the stream meets the sea below. Ngāi Tahu master carver, Fayne Robinson, created the pou. The carvings on the pou show Ngāi Tūāhuriri values, the values important to mahinga kai, and the significance of the area.

The process starts when collection trucks pick up rubbish from people’s homes and businesses around Christchurch and take it to transfer stations such as Southbrook Resource Recovery Park.

At the transfer station, a giant loader is used to scoop rubbish out of the pile and load it into a big metal container. Then it gets compacted as tightly as possible. When a container is full, it gets loaded onto a transport truck and driven out to Kate Valley Landfill. When the truck arrives at the landfill, it unloads the containers in a delivery area. They are picked up by another truck and driven to the tip face, which is where the rubbish is buried.

When the truck gets to the right place, it lifts up one end of the container with a big hydraulic lifter and empties the rubbish onto the ground. At the tip face, the excavator uses its long hydraulic arm and bucket to spread out the rubbish and move it to where it needs to be.

The rubbish then needs to be flattened down. A compactor uses its bulldozer blade to spread out the rubbish evenly. Then it drives over the rubbish with its studded steel rollers and crushes everything down. At the end of the day the rubbish is covered with a layer of soil about 15cm thick.

In the year 2004 Transwaste and the companies that own both the native land and Kate Valley waste land funded an environmental project to restore the forest that once thrived 150 years ago. With tree planting and pest control, the native plants and birds were improving over the years, and the bush has begun to regenerate from farmland back to the native forest.

The reserve is about 4km to the coast. It is 280 meters high from the sea. The walk usually takes 3 hours, return.

22 native bird species have been recorded, including four of our national threatened species and several other rare species. Native birds, including rare species, are becoming more common. Kereru can now be seen regularly around Kate Valley in the Tiromoana bush reserve. A number of extremely rare birds called the crake have been heard in the wetlands.

Restoration plantings are undertaken every year to increase the area of native forest and wetland vegetation, as well as providing nesting sites and food resources for the birds. 177 native plants have been included like seedlings from the remnant black beech forest, tōtara, ribbonwood, lacebark, tī kōuka, lemonwood, kōhūhū, kānuka, mānuka, and five-finger.